

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

To:

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Date of mailing
(day/month/year)

08.10.2004

Applicant's or agent's file reference
9705

IMPORTANT NOTIFICATION

International application No.
PCTGB 03/01423

International filing date (day/month/year)
01.04.2003

Priority date (day/month/year)
12.04.2002

Applicant
BP CHEMICALS LIMITED

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the International
preliminary examining authority:



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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 9705	FOR FURTHER ACTION		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)
International application No. PCT/GB 03/01423	International filing date (day/month/year) 01.04.2003	Priority date (day/month/year) 12.04.2002	
International Patent Classification (IPC) or both national classification and IPC B01J8/00			
Applicant BP CHEMICALS LIMITED			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the opinion II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input checked="" type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application 			
Date of submission of the demand 15.10.2003		Date of completion of this report 08.10.2004	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 851 epo nl Fax: +31 70 340 - 3016		Authorized Officer Vlassis, M Telephone No. +31 70 340-4292 	

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB 03/01423

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-8 as originally filed

Claims, Numbers

1-10 as originally filed

Drawings, Sheets

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**International application No. **PCT/GB 03/01423**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees, the applicant has:

- ☐ restricted the claims.
☐ paid additional fees.
☐ paid additional fees under protest.
☐ neither restricted nor paid additional fees.

2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
☐ not complied with for the following reasons:

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☐ all parts.
☐ the parts relating to claims Nos. .

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Yes: Claims	3-8
	No: Claims	1,2,9,10
Inventive step (IS)	Yes: Claims	3-8
	No: Claims	1,2,9,10
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations

see separate sheet

INTERNATIONAL PRELIMINARY

International application No. PCT/GB 03/01423

EXAMINATION REPORT - SEPARATE SHEET

Re Item IV**Lack of unity of invention**

his Authority considers that there are two inventions covered by the claims indicated as follows:

Group I: Claims 1 and 2 directed to a grid in the form of a web comprising a network of strands of plate segments and branches, wherein each segment has at least two angular and/or curved portions which alternate in direction.

Group II: Claims 3-10 directed to a grid in the form of a web comprising unit cells, each cell comprising a substantially polygonal shape containing 8 sides wherein at least two internal angles are above 180° and at least four internal angles are below 180°.

The common technical features among the above mentioned groups of inventions are a grid having the form of a web of vertically disposed plates. These technical features are already known from DE1079004 (D2) (see fig.1,2 and claim 1 of D2), consequently they are not special technical features and thus, they cannot serve as the unifying inventive concept required by R.13.2 PCT.

The common problem among the above mentioned groups of inventions is also known from D2. More specifically, the problem to provide a grid able to withstand substantial thermal changes without getting distortions in its vertical direction is known from D2 (see col.2, line 48-col.3, line 14 and col.4, lines 3-17) and consequently it cannot serve as a single general inventive concept required by R.13.1 PCT.

Therefore, the above mentioned groups of inventions are not unitary according to R.13 PCT.

Re Item V**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1) The applicant argues in his fax dated 2/9/2004 the novelty of claim 1. Specifically, he sees the difference between D1 and claim 1 in that in D1 "each plate segment [of D1] is not joined at one end to a junction with at least two other plate segments and at the other end either being joined to a junction with at least two other plate segments or terminating at or near the periphery of the grid".

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB 03/01423

Lacking a precise definition of the term "junction" in the description of the present application, this term was interpreted in its broadest sense as "a place where several lines meet, link, or cross each other", or "the state being joint" (see The Collins English Dictionary, 2nd edition, Collins, London & Glasgow, 1986, page 828).

Thus, "junction" is not necessarily understood as a connection between two different pieces of plates. From the description (see page 5, lines 13-15) it is understood that the whole web can be manufactured as one piece (by moulding for example) or assembled from various pieces (by bolting for example). Consequently, a "junction" is understood rather as the point where two or more "plate segments" meet.

Furthermore, the term "plate segment" does not appear to be defined in the application very precisely either. In claim 1 "plate segment" appears to be a plate unit having "at least two angular or curved portions which alternate in direction", for example X-J in figure 1. The plate X-J however, appears to have two further junctions, noted with reference number 4 in figure 1. In claim 1, (a) the plate segments are said to be connected by junctions. It is not clear whether the X-4 piece would be now a "segment" or not, or even a branch. Thus, it appears that the "plate segment" as defined in claim 1, can further consist of joint plates, so that the term "plate segment" is rather to be understood as a notional subdivision of the whole web.

"Branches" are understood as defined in the claim as plates having one free end within the grid and being joined at their other end to a "segment" or another branch.

Considering now figure 2 of D1, the equivalent of the branches would be some or all of the shorter cross arms designated with C. In defining the "plate segments" the junctions 44 are disregarded (in analogy as junctions 4 are disregarded when reading fig.1 of the application in order to define the "plate segments") and instead notionally defined, for example, at some cross points of arms A,B and C (as defined on col.2, lines 19-30 of D1).

Consequently, interpreting the various terms as explained above, in a manner similar to the interpretations derived from the present application, the grid disclosed in figure 2 of D1 contains all technical features of claim 1.

Additionally, the alternation in direction of the angular portions is of equal magnitude. As can be seen from fig.2 the grid of D1 is free from a solid boundary perimeter plate and can be formed from metal (see col.1, line 43). Therefore, the subject-matter of claims 1, 2 and 9,10 (as far as they depend on claim 1)

INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET

International application No. PCT/GB 03/01423

P. 001

is not novel in view of D1.

Consequently, the present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1,2 and 9,10 (as far as they depend on claim 1) is not new in the sense of Article 33(2) PCT.

2) D2 is considered as the closest prior art document in regard to claim 3 (and subclaims 4-10 as far as they depend on claim 3). D2 discloses a grid suitable for load bearing. It comprises a web of interconnected strips and in a horizontal cross-section the web has a repeating pattern of cells. The difference between D2 and claim 3 is seen in that the cells of the grid of D2 do not comprise a substantially polygonal shape containing 8 sides wherein at least two internal angles are above 180° and at least four internal angles are below 180°.

Therefore, the subject-matter of claim 3 (and subclaims 4-10 as far as they depend on claim 3) is novel over D2.

The problem solved by said difference is seen in the provision of a grid withstanding substantial thermal changes without getting distortions in its vertical direction. D2 neither discloses nor suggests polygonal cells with 8 sides and the specific angles.

Therefore, the subject-matter of claim 3 (and subclaims 4-10 as far as they depend on claim 3) is considered to involve an inventive step.